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ARBOR DAY.

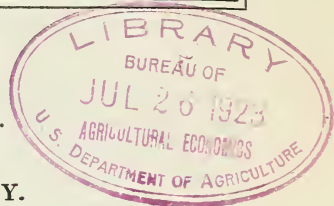
PREPARED BY THE FOREST SERVICE.

THE MEANING OF ARBOR DAY.

Arbor Day has become associated all over the United States with patriotic and esthetic as well as economic ideas. It is at once a means of doing practical good to the community and an incentive to civic betterment. The planting of trees by school children is usually accompanied by ceremonies intended both to impress upon those present the beauty of trees and their effect in improving the



*"In the green veins of these fair growths of earth,
There dwells a nature that receives delight
From all the gentle processes of life,
And shrinks from loss of being."*



appearance of school grounds, streets, parks, highways, etc., and to lead them to a realization of the value of community and national foresight. As a patriotic festival it partakes of the nature of Fourth of July celebrations or the observance of Washington's Birthday, and in the South, where the season is propitious, it is in some States observed on February 22. It now bids fair to acquire new significance as the day most often chosen for planting of trees and groves in memory of those who have fallen in the Great War.

ORIGIN OF ARBOR DAY.

The origin of Arbor Day is not definitely known. An old Swiss chronicle, however, furnishes the first record of its observance. In the fifth century, according to this story, the people of a little Swiss village determined to have an oak grove in the public square. A day was set, and the entire community—men, women, and children—went to the woods, carefully dug up oak saplings, and brought them to the village square, where they were as carefully planted. Each boy and girl participating in the labor received a wheaten roll as a reward, and in the evening the grown-up people had a feast and a frolic. For years afterwards the anniversary of this tree planting was observed with appropriate ceremonies by the villagers.

In the United States Arbor Day was first observed in "treeless Nebraska." The Hon. J. Sterling Morton, then a member of the State board of agriculture, and later United States Secretary of Agriculture, is recognized as the father of Arbor Day in this country. At a meeting of the State Board of Agriculture of Nebraska, held at Lincoln, January 4, 1872, he introduced a resolution "That Wednesday, the 10th day of April, 1872, be * * * especially set apart and consecrated to tree planting in the State of Nebraska." The resolution was adopted, and prizes were offered to the county agricultural society and to the individual who should plant the greatest number of trees. Wide publicity was given to the plan, and over a million trees were planted in Nebraska on that first Arbor Day.

In 1874, Governor Furnas, of Nebraska, by public proclamation set aside the 3d day of April as Arbor Day, and in 1885 the State legislature passed an act designating the birthday of Mr. Morton, April 22, as the date of Arbor Day and making it a legal holiday.

SPREAD OF THE OBSERVANCE OF ARBOR DAY.

Arbor Day has been celebrated in Nebraska with enthusiasm from its very beginning to the present day. Tree planting was no new thing there when the Arbor Day plan was originated by Mr. Morton, for the first settlers found that the lack of trees was a serious drawback, and some attempt was soon made to supply the deficiency. Every farmer needs wood and fence posts. Just as imperative is the need of protection for orchards, field crops, and buildings from the winds that sweep unhindered over that flat country. Before 1872, however, planting had been haphazard. The adoption of the Arbor Day plan meant the organization of the work in the State.

Thereafter the people of Nebraska were being continually reminded of the desirability of planting trees and at the same time were furnished with instructions regarding the choice of species and how to plant and care for them. Nearly a billion trees have been planted in the State since the plan was first adopted. It is estimated that more than 700,000 acres have been planted in Nebraska, so that from being practically a treeless State, almost the only original growth being along the water courses, it has become one of the leaders in practical forestry, and is so much identified with tree raising that on April 4, 1895, the legislature passed a resolution that the State be popularly known as "The Tree Planter's State."

Kansas and Tennessee followed the lead of Nebraska in 1875, and the next year Minnesota fell into line. In Kansas the same conditions as in Nebraska made the plan of immediate economic importance. In Minnesota the white-pine forests were being destroyed with alarming rapidity, and no provision was being made for replacing them. After 1876 there was for some years a check in the spread of the Arbor Day idea, and it was not until 1882 that two more States began to celebrate the day—North Dakota and Ohio.

Before 1882 the efforts to extend the celebration of Arbor Day had been made through agricultural associations and town authorities. The first celebration of the day in Ohio, which took place during the sessions of a national forestry convention at Cincinnati, took an entirely new form at the suggestion of Warren Higley, president of the Ohio Forestry Commission. Under the direction of Superintendent of Schools John B. Peaslee the school children of the city had a prominent part in the celebration, which included a public parade through the streets to Eden Park, where trees were planted in memory of distinguished men. About 20,000 children participated in the singing and reciting and in putting the soil about the trees, which had already been set in place. Two new elements were introduced into the Arbor Day plan on this occasion—the day was made a school festival and the practice of planting memorial trees and groves was inaugurated. These new developments became known as the "Cincinnati plan" (Fig. 1), and were largely responsible for the extension of Arbor Day over the rest of the United States and beyond. Tree planting became a festival combining pleasure, utility, and instruction; and one of the greatest benefits of the observance of Arbor Day has been its effect in impressing upon the minds of the young people the value of trees and the necessity of conserving all the natural resources of the country.

The American Forestry Congress in 1883 at St. Paul, Minn., passed a resolution recommending the observance of Arbor Day in the schools of every State in the Union, and a committee was appointed to demonstrate to school authorities all over the country the value of Arbor Day celebrations to the school and to the community. Hon. R. G. Northrop, of Connecticut, who was the author of the resolution, was made chairman of this committee and was indefatigable in urging the claims of Arbor Day, personally and by letter, to governors and State superintendents of education. At the annual meeting of the National Educational Association in 1884 he offered a resolution similar to that adopted at St. Paul, and although no ac-

tion was taken then, the next year the association adopted the following:

Resolved, That in view of the valuable results of Arbor Day work in the six States where such a day has been observed, alike upon the school and the home, this association recommends the general observance of Arbor Day for schools in all our States.

With this indorsement, Mr. Northrop's efforts were assured of success, and so well did he do the work that Arbor Day has now become primarily a school festival.

As a school festival the observance of Arbor Day has spread not only throughout the whole United States but far beyond its borders. In 1887 the educational department of Ontario set aside the first Friday in May as a tree and flower planting day. In 1896 the plan was adopted officially in Spain. It reached Hawaii in 1905, and is



FIG. 1.—Author's Grove, Eden Park, Cincinnati, planted and dedicated by school children.

now in vogue in all the dependencies of the United States and in Great Britain, Canada, Australia, the English West Indies, South Africa, New Zealand, France, Norway, Russia, Japan, and China.

DATES OF ARBOR DAY OBSERVANCE.

The time of observance of Arbor Day varies greatly in different States and countries, being determined somewhat by climatic conditions. Sometimes a day which is already a holiday is selected, as in Alabama and Texas, where Washington's Birthday has been chosen. In many States of the Union it is combined with "bird day." In general, the date is early in the year in the South and is set further along toward summer in the more Northern States, beginning in February and ending in May. The following table gives the dates of observance in various States and Territories.

State or Territory.	First observance.	Law enacted.	Time of observance.
Alabama.....	1887	.....	In the spring; often on "Audubon day."
Arizona.....	1890	.....	In five northern counties, the Friday following 1st day of April; elsewhere, Friday following 1st day of February.
Arkansas.....	1906	1905	First Saturday in March.
California.....	1886	1909	Mar. 7, birthday of Luther Burbank.
Colorado.....	1885	1889	Third Friday in April. The governor issues a proclamation each year.
Connecticut.....	1886	1886	In the spring, by proclamation of the governor.
Delaware.....	1901(?)	.....	In April, by proclamation of the governor.
District of Columbia.....	1920	.....	Third Friday in April, by proclamation of the commissioners.
Florida.....	1886	.....	First Friday in February.
Georgia.....	1887	1890	First Friday in December.
Hawaii.....	1905	.....	In November, before the winter rains; by proclamation of the governor.
Idaho.....	1886	1903	Various dates between Apr. 1 and May 1, selected by county superintendents.
Illinois.....	1887	1887	Arbor and bird days in April and October, by proclamation of the governor.
Indiana.....	1884	1913	Third Friday in April each year.
Iowa.....	1887	.....	Proclamation of the governor.
Kansas.....	1875	.....	Option of the governor.
Kentucky.....	1886	.....	In the fall, by proclamation of the governor.
Louisiana.....	1888	.....	Second Friday in January, by resolution of State board of education.
Maine.....	1887	.....	In the spring; option of the governor.
Maryland.....	1884	1884	First or second Friday in April, by proclamation of the governor.
Massachusetts.....	1886	.....	Last Saturday in April, by proclamation of the governor.
Michigan.....	1885	.....	Usually last Friday in April or first in May, by proclamation of the governor.
Minnesota.....	1876	.....	Latter part of April, by proclamation of the governor; usually upon the suggestion and recommendation of the State forest service.
Mississippi.....	1890	.....	December or February. Law authorizes State board of education to fix date.
Missouri.....	1886	1889	First Friday after first Thursday in April.
Montana.....	1888	1887	Second Tuesday in May.
Nebraska.....	1872	1885	Apr. 22, birthday of J. Sterling Morton—legal holiday.
Nevada.....	1887	.....	By proclamation of governor.
New Hampshire.....	1886	.....	Early in May, by proclamation of governor.
New Jersey.....	1884	1908	Second Friday in April.
New Mexico.....	1890	.....	Second Friday in March, by proclamation of the governor.
New York.....	1889	1889	Friday following the 1st of May.
North Carolina.....	1893	1915	Friday after Nov. 1, by proclamation of the governor.
North Dakota.....	1882	.....	Option of the governor.
Ohio.....	1882	1892	About the middle of April, by proclamation of the governor.
Oklahoma.....	1898	1901	Friday following the second Monday in March.
Oregon.....	1889	.....	Second Friday in February in western Oregon; second Friday in April in eastern Oregon.
Pennsylvania.....	1887	1887	In the spring, by proclamation of the governor, and in the fall by authorization of superintendent of public instruction.
Philippine Islands.....	1906	.....	Usually late in September or early in October, by proclamation of the governor.
Porto Rico.....	.....	.....	Last Friday in November.
Rhode Island.....	1887	1887	Second Friday in May—public holiday.
South Carolina.....	1898	1898	Third Friday in November.
South Dakota.....	.....	.....	No law, but generally observed in April throughout the State.
Tennessee.....	1875	1887	First Friday in April, by proclamation of the governor.
Texas.....	1890	1889	Feb. 22.
Utah.....	.....	.....	Apr. 15.
Vermont.....	1885	.....	Usually first Friday in May; option of the governor.
Virginia.....	1892	1902	In the spring, by proclamation of the governor.
Washington.....	1894	.....	Usually the first Friday in May, by proclamation of the governor.
West Virginia.....	1883	.....	Usually observed on the second Friday in April.
Wisconsin.....	1892	1889	Usually observed on the first Friday in May.
Wyoming.....	.....	1888	Usually observed on the first Friday in May, by proclamation of the governor.

More than half of the States have enacted a law for the observance of Arbor Day. In the others and in several of the Territories the day is observed by proclamation of the governor, authorization of the superintendent of education, or other action. In at least two of the States—Nebraska and Rhode Island—the day has been made a public holiday.

ARBOR DAY AND THE SPIRIT OF CIVIC BETTERMENT.

The planting of trees on Arbor Day can provide a direct economic resource only in comparatively treeless regions or where windbreaks and timber and fuel for home and neighborhood use are needed. Forest plantations whose chief purpose is the raising of timber for commercial use or the protection of watersheds upon which cities and towns depend for their water supply must be left to foresters. However, yearly plantings accompanied by appropriate exercises serve to keep the people continually reminded of the value and necessity of the work of the foresters, and they have such a far-reaching effect on the community spirit and through that on economic and

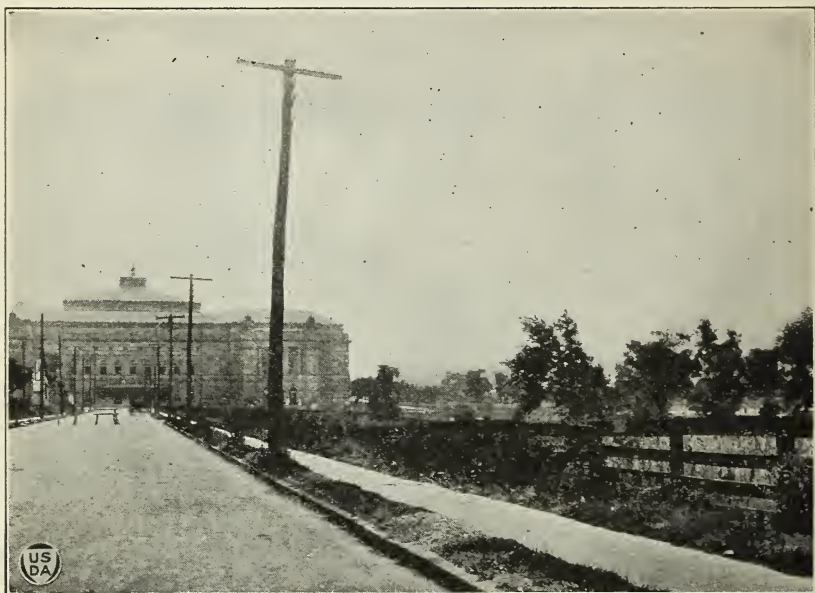


FIG. 2.—An imposing building with a neglected approach.

social betterment that no community can afford to neglect Arbor Day. In the Philippine Islands the observance of Arbor Day has resulted not only in the creation of a public interest in planting roadside trees, but also in reforestation on their over-cut communal forests and barren nonagricultural and grass lands. (Figs. 2 and 3.)

A clean and beautiful town is a source of pride to its citizens and a constant incentive to them to go on and do better. A slovenly town is apt to mean slovenly inhabitants. The celebration of Arbor Day may very well be the turning point in the attitude of the community toward its civic duties and by consequence toward its social life and its manner of conducting business. Nothing so helps to beautify a city or town as trees, and few things so educate the people in public spirit and foresight as the care of trees.

CARE OF TREES.

The celebration of Arbor Day by the planting of trees is the assumption of an all-the-year-round responsibility. A New York Arbor Day Annual contains the following timely advice:

Apparently there is more need for the care of trees and shrubs than there is for actual planting. * * * Trees and shrubs to be of any avail must be planted on school grounds with the same forethought that a farmer gives to the planting of an orchard, and they must be looked after not simply on Arbor Day but all the year. It ought to be understood by school officers everywhere that mere sentiment will not arouse the patrons of a school district to beautify their school grounds. The whole matter must in some way be put before them on a plain business basis. They must see that it pays, as in the end it most certainly does, to paint the schoolhouse whenever it needs it, to plant and care for trees and shrubs about the grounds, and give the whole place an inviting air of cleanliness and respectability that commands the respect and admiration of the stranger and teaches an invaluable lesson to the home community.

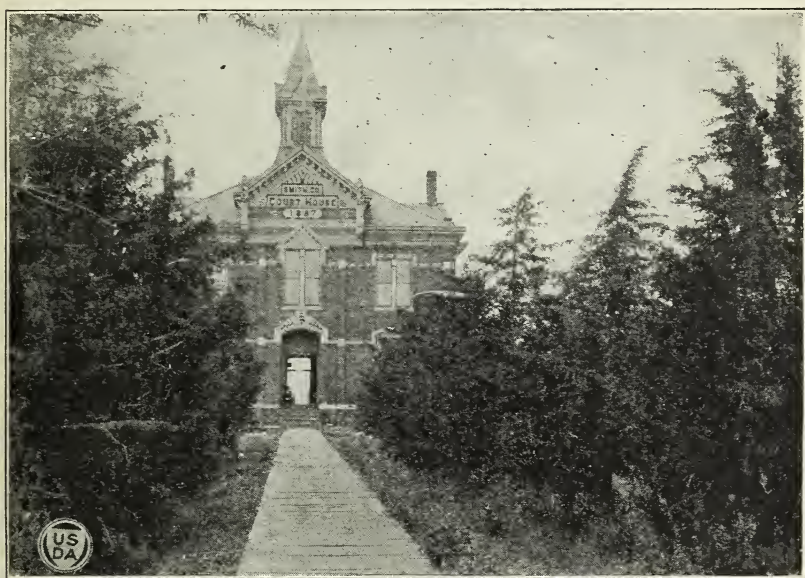


FIG. 3.—Cultivated red cedars along walk to courthouse.

The planting and care of trees will inculcate in school children perseverance and foresight and will impress upon them the desirability of making the best use of the resources of nature both economically and esthetically.

An even more important lesson, the damage done to our natural parks and woods by the thoughtless and selfish vandal, may be taught through a judicious observance of Arbor Day. What fire is to the forest, this marauder is to the community park and woodlands in the destruction of ornamental trees and shrubs. The National and State Governments are using every possible means to educate the general public in the care of the forest, whose relation to the welfare of man is becoming more and better understood and appreciated with every passing year of education and cooperation. The influence of public opinion may be put to still more intensive use

through neighborhood and community influence upon the smaller circle over which it has to be exerted.

The spring woods of the East and South particularly are yearly stripped of the virgin beauty of the dogwood, the laurel, and other flowering trees and shrubs, while at the Christmas season the glowing holly and the tender pines and firs are shorn of their richness by the home decorator, or, more often, by the commercial dealer in Christmas greens. The school children in some sections and other friends of nature are "adopting" these helpless forms of the wild life which is slowly receding before the advance of so-called civilization. Arbor Day may be made a day of esthetic and economic value to the community and the Nation if the lesson of such vandalism is brought home to the participants. It is more often sheer ignorance and thoughtlessness than real indifference or viciousness which deprives nature's haunts of their greatest beauties. How much more satisfactory and educational it is to take the child or the adult with the child heart to the natural environment of this wild life than to strip and destroy in order to make an artificial bower of a four-walled room. If we would imitate nature, why not do it in nature's way, by natural thinning and gradual pruning, rather than by bleeding branch, bruising blossom, or perhaps uprooting stem and all? And when it comes to the annual demand for the "best tree in the world," selection from the often superabundant young growth, with careful attention to the good of the forest, will meet all ordinary needs. Where there is no profusion of young trees, man is learning to manage "Christmas-tree farms," so that the supply may be provided without too heavy a drain on the woods. Let us give thought that we may learn of nature and respect her laws.

PLANTING OF TREES ALONG ROADS AND HIGHWAYS.

In the past the planting of trees on Arbor Day has usually been in school grounds or parks. Recently it has begun to be used as a means of stirring up interest in roadside planting, first in cities and then in rural communities. The city of Newark, N. J., is doing model work along this line. The municipal shade-tree commission issues a map of the city showing the streets that are in its care and the variety of trees planted on each, a leaflet giving directions for the planting and care of trees along the streets, and a general Arbor Day pamphlet. In one year nearly 3,177 trees were planted on 46 streets. Washington, D. C., owes a good deal of its attractiveness to the unusual completeness and excellence of its street tree planting. Many other cities are now organizing the work of tree planting on the streets, and in every case Arbor Day is used as a means of arousing public interest.

In 1913 the United States Bureau of Education issued a bulletin entitled "Good Roads Arbor Day," in which were set forth the advantages of planting trees along the highways. In his letter transmitting the bulletin to the Secretary of the Interior the commissioner said:

One of the greatest needs of our country is good public roads. The reason we do not have them wherever needed is not primarily because of the cost of building them. * * * The roads are not built because the people do not

understand their value or comprehend how much beauty they would contribute to the country and how much pleasure to life. * * * Not only should we build good roads; we should also make them attractive and comfortable to travel over. In many European countries this is done by planting the roadside with rows of trees * * *. This tree planting by the roadside has not yet become common in this country as it should.

Some objection has been made to trees along the roadside on the ground that they hinder drying out after wet weather. This holds good if the road is poorly built; but trees are actually an aid in keeping a well-built road dry if they are not planted too close. The roots by constantly taking in water assist in drainage, and the tops by breaking the force of driving rains prevent washes in the roadway. The most important use of trees by the roadside, however, is the prevention of dust. Dust is the cementing material in macadam roads, and if it is loosened and blown away the breaking up of the road is hastened.

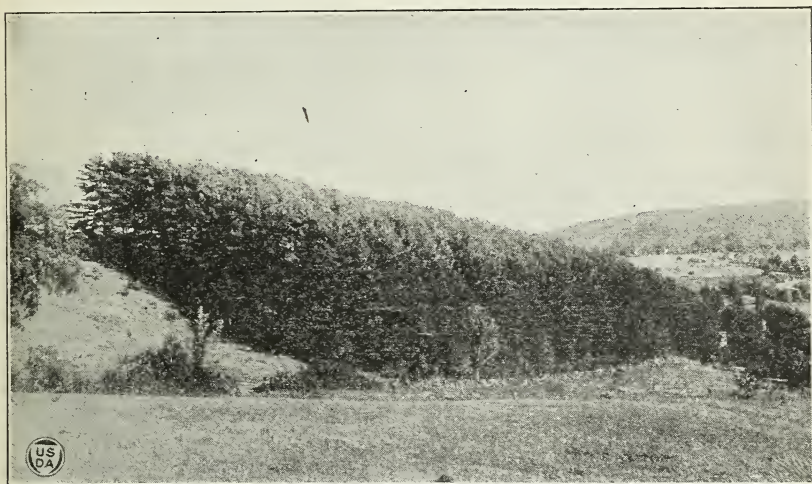


FIG. 4.—Where planting paid. This 3-acre piece of sidehill has been reclaimed by planting white pine on a worn-out field. In addition to the reforestation of the slope, two successive crops have been cut from the plantation.

WOODS AND WATER SUPPLY.

What the trees do for the roads they do also for the forested hill-sides (Fig. 4). Wherever there are no forests on the hills and mountains the rain and melted snow rush off in torrents, digging out great gullies and carrying away the fertile soil. Where there is a forest the trees protect the soil from the beating of the rain; the roots lead the water deep into the ground, to be stored up there and gradually fed out by springs all the year round; the leaf litter absorbs and holds the water like a sponge; the trunks and roots prevent the rapid run-off of water and bind the soil together. Thus the forest is of tremendous benefit in preventing both floods and drought; and it is highly desirable, often imperative, that the watersheds of navigable streams and those upon which towns, cities, irrigation projects, and water-power plants depend for their supply should be forested. In a number of the Northeastern States the areas surround-

ing municipal and private reservoirs are systematically planted with forest trees for the protection of the water supply. (Fig. 5.)

The greatest value of Arbor Day lies in its effect upon our attitude toward the trees that are already growing: for manifestly there are thousands of trees of natural origin to every one planted by man. The average citizen is only now beginning to realize the necessity for taking care of these trees, having never before considered that they needed any care.

President Roosevelt in his Arbor Day letter to the school children of the United States laid particular stress on that side of the Arbor Day festival which teaches the necessity of careful use and perpetuation of our natural resources.

For the nation, as for the man or woman or boy or girl, the road to success is the right use of what we have and the improvement of present opportunity. If you neglect to prepare yourselves now for the duties and responsibilities which will fall upon you later, if you do not learn the things which you will



FIG. 5.—In alliance with nature. Arbor vitae and white pine planted groves protecting the borders of a reservoir of the metropolitan water works, Clinton, Mass.

need to know when your school days are over, you will suffer the consequences. So any Nation which in its youth lives only for the day reaps without sowing and consumes without husbanding must expect the penalty of the prodigal, whose labor could with difficulty find him the bare means of life.

A people without children would face a hopeless future; a country without trees is almost as helpless; forests which are so used that they can not renew themselves will soon vanish, and with them all their benefits. A true forest is not merely a storehouse full of wood, but, as it were, a factory of wood and at the same time a reservoir of water. When you help to preserve our forests or plant new ones you are acting the part of good citizens.

To commemorate the golden anniversary of Arbor Day, April 22, 1922, President Harding issued the following proclamation on March 31 of that year:

A PROCLAMATION.

Whereas the protection and perpetuation of our forests are vital to our continued industrial welfare and national strength and to our individual health, comfort, and prosperity; and

Whereas a period of fifty years has passed since, in April, 1872, there was instituted in the State of Nebraska observance of a day especially set apart and consecrated for tree planting, and known as Arbor Day; and

Whereas, both through widespread annual celebration of Arbor Day and through the increasing observance of forest-protection week, public attention has been commendably directed to the value of trees, the unnecessary waste of our diminishing forests through preventable fires, the deplorable effects of forest devastation, and the need for remedial measures against depletion of an essential natural resource:

Therefore I, Warren G. Harding, President of the United States, do urge upon the governors of the various States to designate and set apart the week of April 16-22, 1922, as forest-protection week, and the last day of that week, April 22, as the golden anniversary of Arbor Day, and to request officers of public instruction, of counties, cities and towns, and of civic and commercial organizations to unite in thought and action for the preservation of our common heritage by planning such educational and instructive exercises as shall bring before the people the disastrous effects of the present waste by forest fires and the need of individual and collective effort to conserve the forests and increase our tree growth for ornament and use.

In witness whereof I have hereunto set my hand and caused the seal of the United States to be affixed.

In response to this proclamation the governors of 23 States issued proclamations or recommended observance of this anniversary with special reference to forest protection.

MEMORIAL TREES.

When the Great War came to an end with the signing of the armistice in November, 1918, the thoughts of the Nation turned at once to finding appropriate memorials for those who had fallen for the cause of world freedom. For this purpose it seemed especially fitting that each community commemorate the sacrifice made by its own citizens by planting, with suitable ceremonies, groves or avenues of trees, which should serve at once as incentives to civic progress and betterment and as living monuments to the fallen soldiers. Many organizations took up the idea, and the Secretary of Agriculture addressed a letter to the governors of the States suggesting that they "commend to the citizens of their States, and particularly to those in attendance upon its schools, such an observance of Arbor Day as will secure a widespread planting of trees, dedicated to those whose lives have been sacrificed in the great struggle to preserve American rights and the civilization of the world."

TREES TO PLANT.

The permanent success of the Arbor Day memorial plan, as of any other plan involving tree planting, is conditioned upon the selection of the right species and upon proper attention to the planting and the subsequent care of the trees.

The following list will assist in the selection of the species suitable for planting in various portions of the United States. The list is suggestive, and the absence of any particular species from it does not necessarily mean that the species is unsuitable, but all the species included are suited for general use in parks, school grounds, and

streets.¹ For street planting, care should be taken to have all the trees on a street of one species and to choose a species suited for the width of the street, and, especially in cities, one which will thrive under hard conditions.

For New England States, New York, Pennsylvania, New Jersey, Ohio, West Virginia, Kentucky, Indiana, Michigan, Illinois, Missouri, and Iowa:

Deciduous trees.—Sugar maple, Norway maple, scarlet maple, green ash, white ash, American white elm, red oak, white oak, pin oak, scarlet oak, American linden.

Evergreen trees.—White spruce, Colorado blue spruce, white pine, Scotch pine, balsam fir, hemlock, arbor vitæ.

For Delaware, Maryland, District of Columbia, Virginia, North Carolina, South Carolina, Georgia, Tennessee, Florida, Alabama, Mississippi, Louisiana, Arkansas, Oklahoma, and Texas:

Deciduous trees.—Tulip, sycamore, pin oak, white oak, scarlet oak, black oak, red oak, white ash, bald cypress, Norway maple, scarlet maple, red elm, American white elm, Kentucky coffeetree, American linden, red gum, black gum, hackberry, willow oak, gingko.

Evergreen trees.—White pine, longleaf pine, slash pine, magnolia, live oak, cedar of Lebanon, American holly.

For Wisconsin, Minnesota, North Dakota, South Dakota, Nebraska, Kansas, Colorado, Wyoming, Montana, and Idaho:

Deciduous trees.—Bur oak, linden, Norway maple, green ash, wild cherry, larch, American elm, black walnut, hackberry, honey locust, black locust; and, less desirable, cottonwood and boxelder.

Evergreen trees.—Scotch pine, Austrian pine, white pine, Norway spruce, Colorado blue spruce, white spruce, red cedar, arbor vitæ.

For New Mexico, Arizona, Utah, Nevada, and southern Idaho:

Deciduous trees.—Bur oak, Norway maple, American elm (infested with rust in Utah), honey locust, black locust, green ash, linden, hackberry, mountain cottonwood, valley cottonwood, sycamore, black walnut, silver maple, western larch.

Evergreen trees.—Austrian pine, arbor vitæ, Deodar cedar, box, western yellow pine, blue spruce, Douglas fir, mountain red cedar.

For California, Oregon, and Washington:

Deciduous trees.—Coast region: Large-leaved maple, European linden, sycamore, weeping willow. Columbia Basin: Norway maple, European linden, sycamore, green ash, silver poplar, Russian poplar, white willow.

Evergreen trees.—Coast region: Deodar cedar, Monterey cypress, Monterey pine, Lawson cypress. Columbia Basin: Bigtree, Douglas fir, western yellow pine.

PLANTING SUGGESTIONS.²

The proper season for planting is not everywhere the same. Where spring is the best season—north of the thirty-seventh parallel generally—the right time is when the frost is out of the ground and before budding begins.

Trees can not be thrust into a rough soil at random and be expected to flourish. They should be planted in well-worked soil, well en-

¹ Only under very unusual conditions are the evergreens suitable for street planting; they are chiefly useful for planting in parks, lawns, and school grounds.

² In practically every State there is now a forestry department, from which may be obtained suggestions as to the best time to plant, the kinds and sizes of trees to be planted for different purposes, the method of planting, and the spacing of the trees.

riched. If they can not be set out immediately after being secured, the first step is to prevent their roots drying out in the air. This may be done by standing the roots in a "puddle" of mud, or by "heeling in" the trees—that is, burying the roots in fresh earth and packing it enough to exclude the air. Before planting cut off the ends of all broken or mutilated roots, and prune the tree to a few main branches and shorten these.

Dig holes at least 3 feet in diameter and 2 feet deep. If the soil is poor, they should be 4 feet in diameter. Make the sides perpendicular and the bottom flat. Break up the soil in the bottom to the depth of the spade blade. Spread on the bottom 12 or 15 inches of good topsoil, placing at the top the fine soil, free from sods or other decomposing matter. On the top of this layer spread the roots of the tree as evenly as possible and cover them with 2 or 3



FIG. 6.—"A man who plants a tree and cares for it has added at least his mite to God's creation."

inches of fine topsoil. Tramp the soil down firmly with the feet, water thoroughly, and after the water soaks in fill the hole with good earth, leaving the surface loose and a little higher than the surface of the surrounding soil.

When planted the trees should stand 2 or 3 inches deeper than they stood in the nursery. They should be planted far enough apart so that at maturity they will not be crowded.

Young trees should not only be properly transplanted but should be cared for until they become so well established that they will grow without danger of dying of neglect. This care and protec-

tion of transplanted trees may very easily be assigned to Boy and Girl Scouts or other organizations of young boys and girls. The lessons of Arbor Day will thus be impressed upon the youth and future citizenship of our land.



FIG. 7.—Do not neglect the sensitive guest tree until it is perfectly at home.

The wealth, beauty, fertility, and healthfulness of the country largely depends upon the conservation of our forests and the planting of trees.—*Whittier*.

This publication supersedes Department Circular 8, issued June, 1919.

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